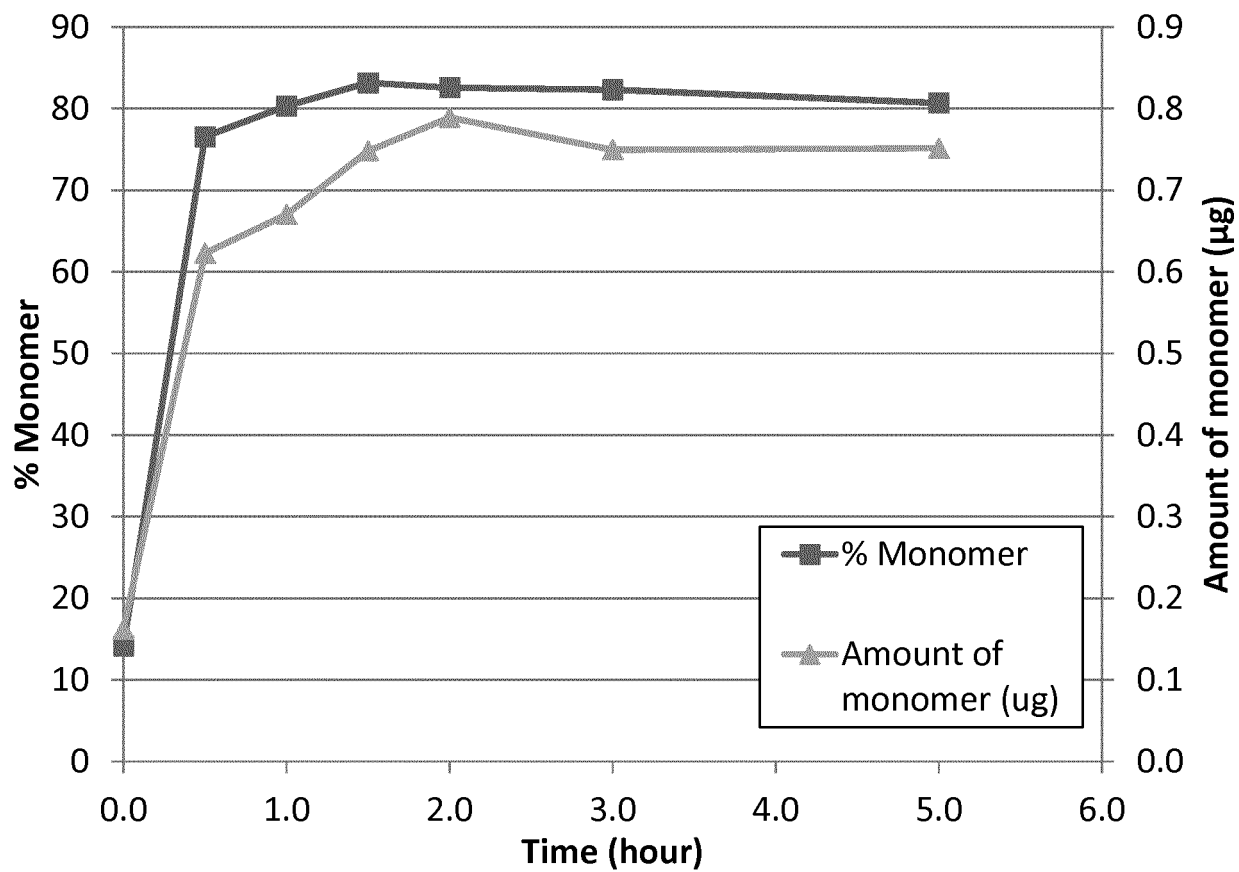


1/24

Figure 1



2/24

Figure 2A

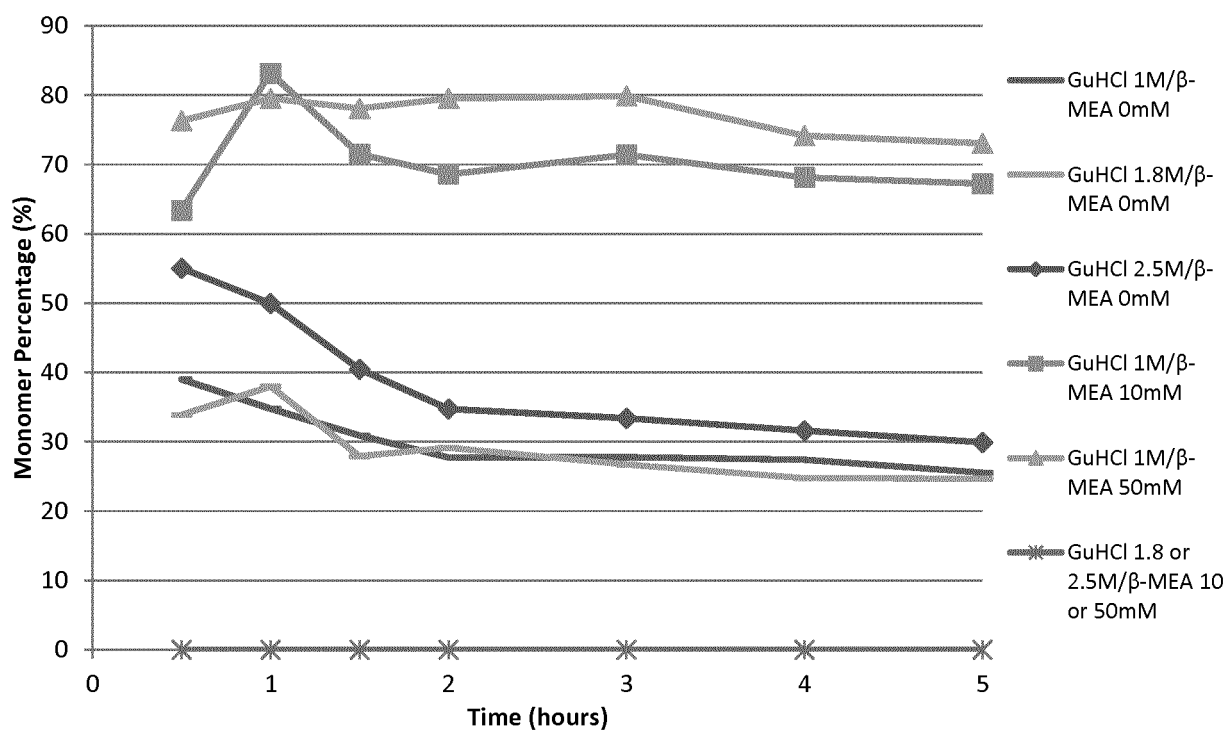
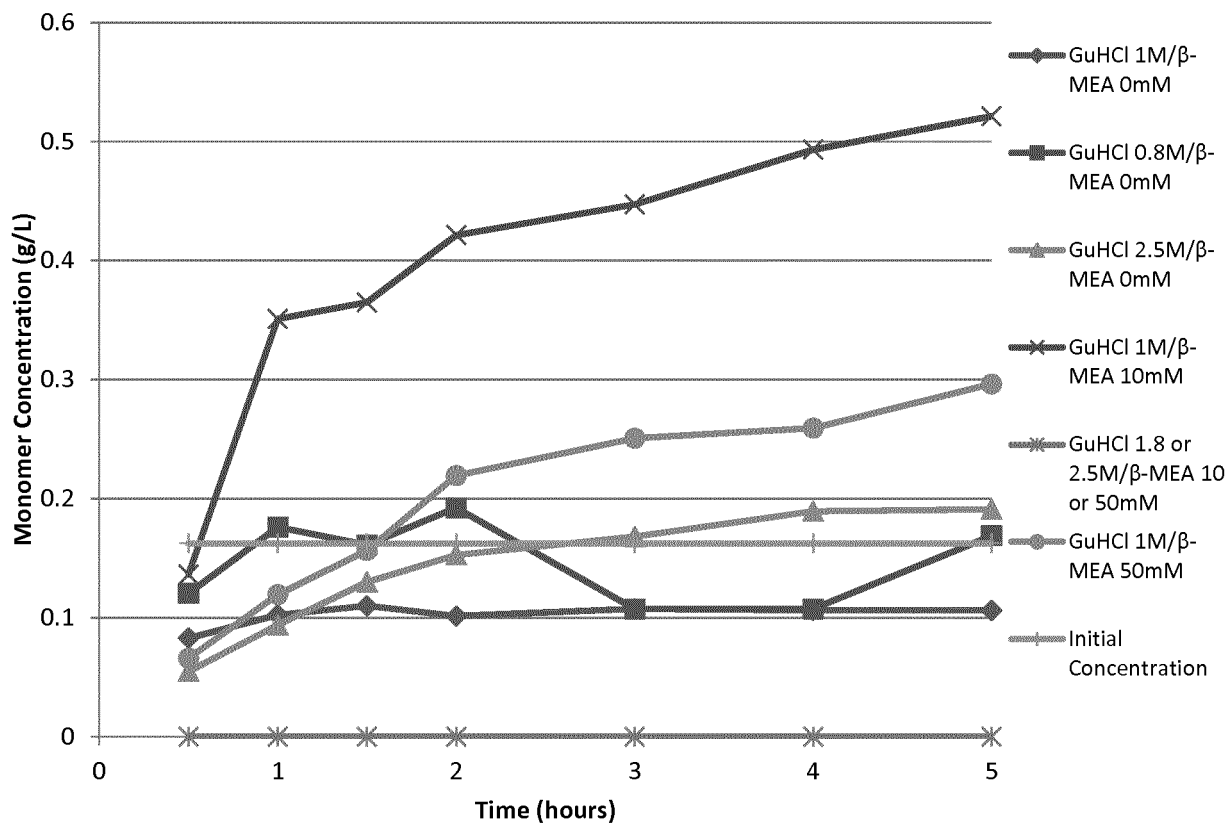
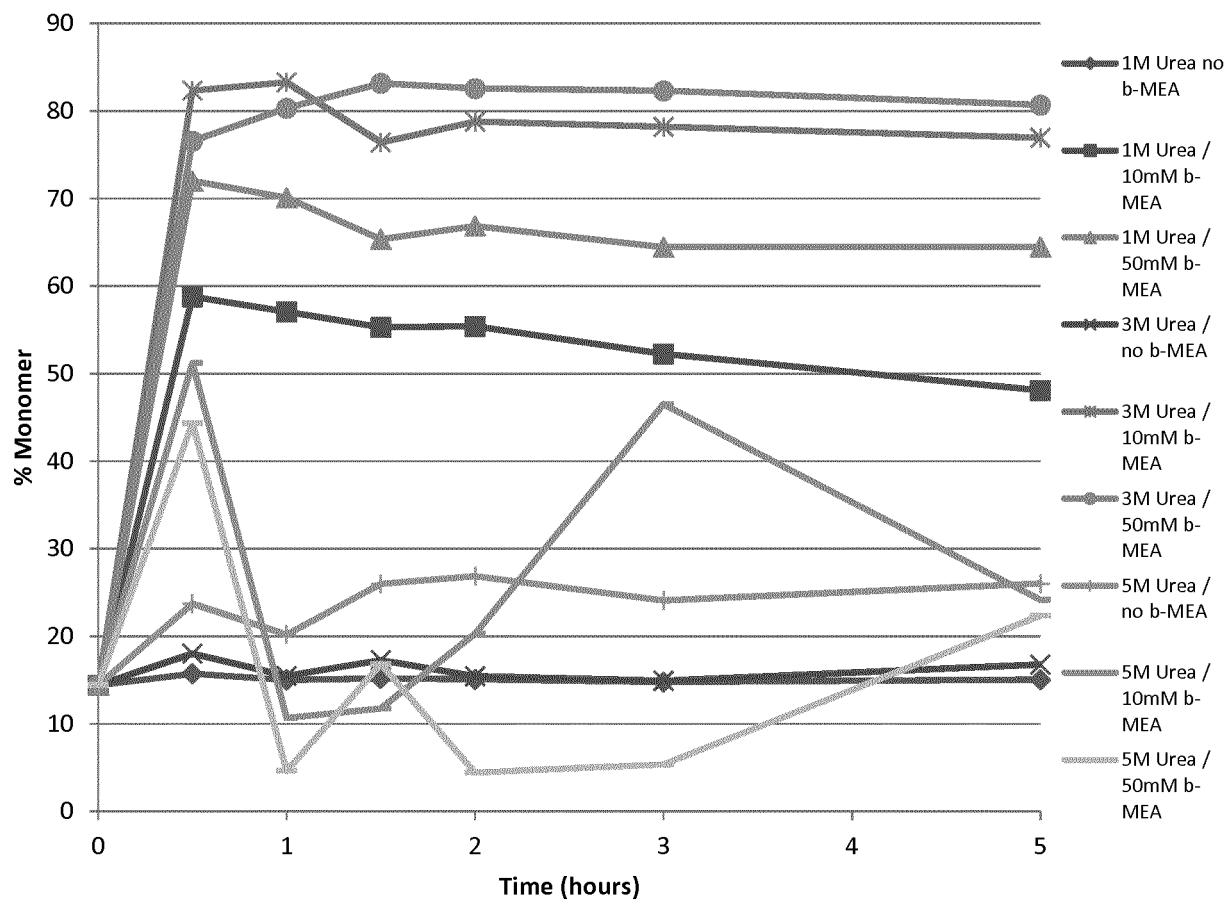


Figure 2B:



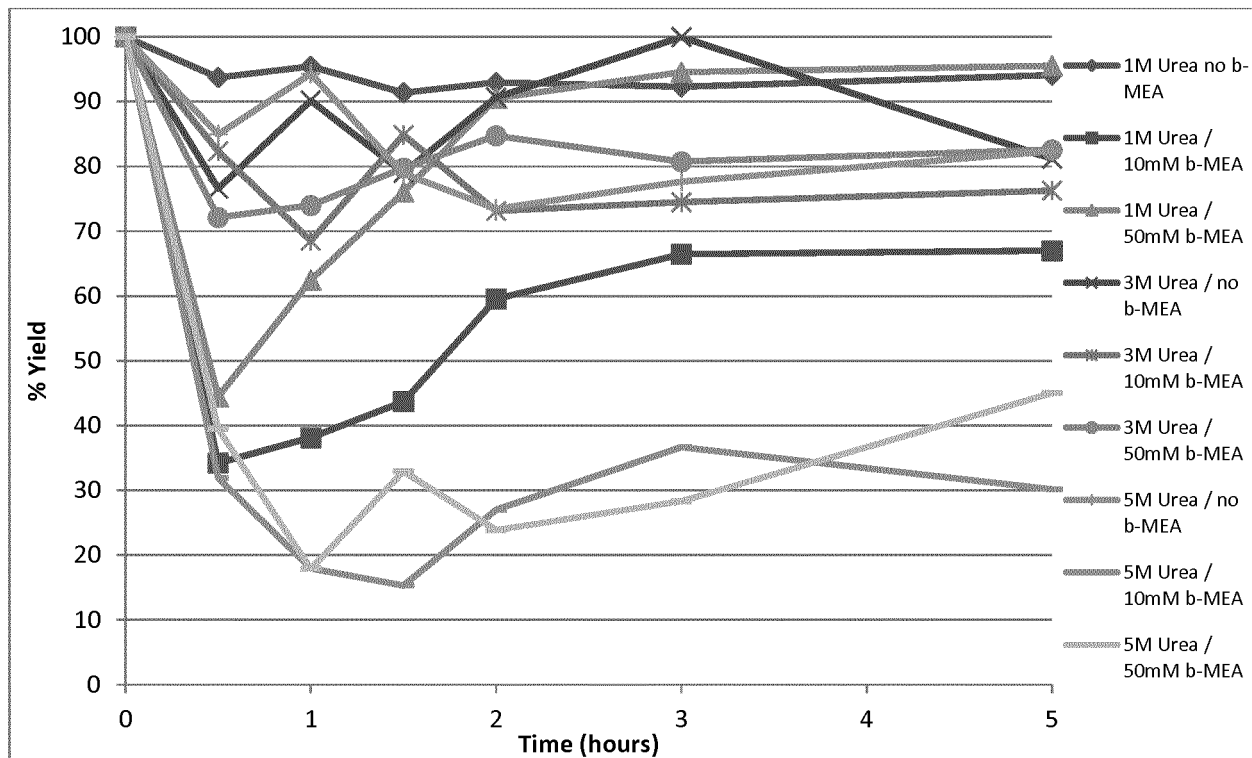
3/24

Figure 2C:



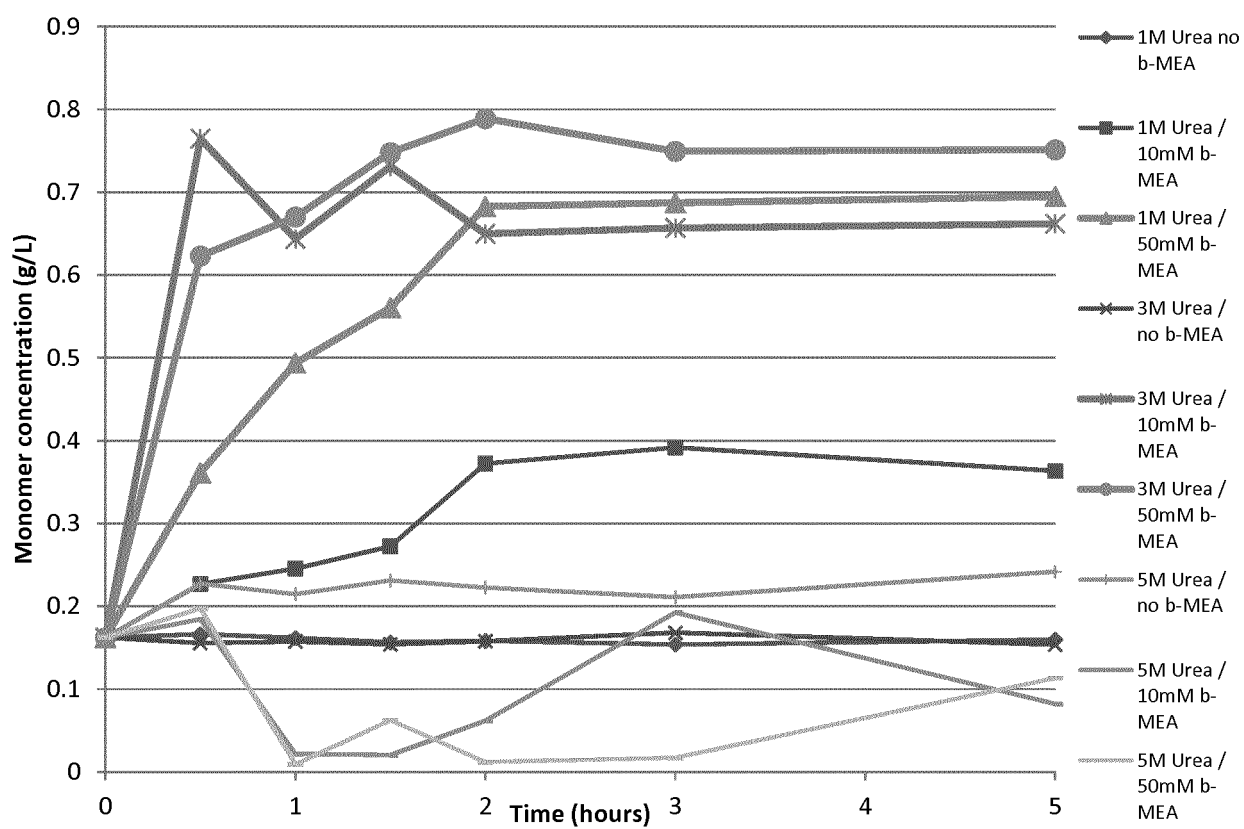
4/24

Figure 2D:



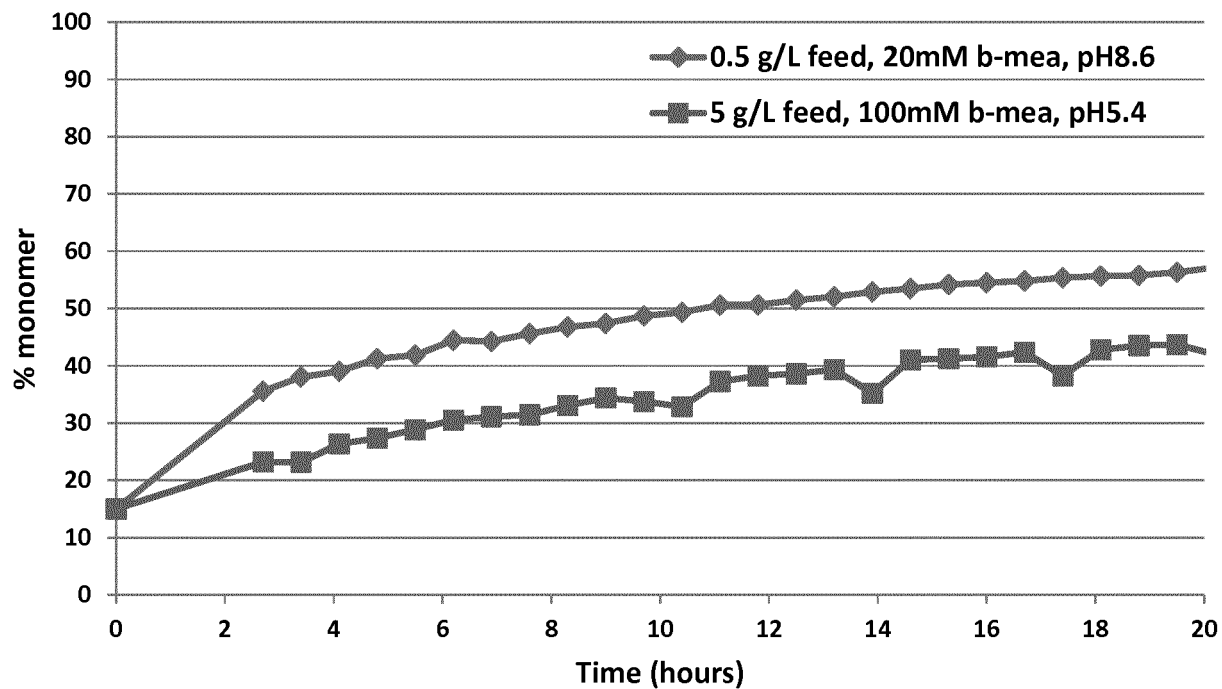
5/24

Figure 2E:



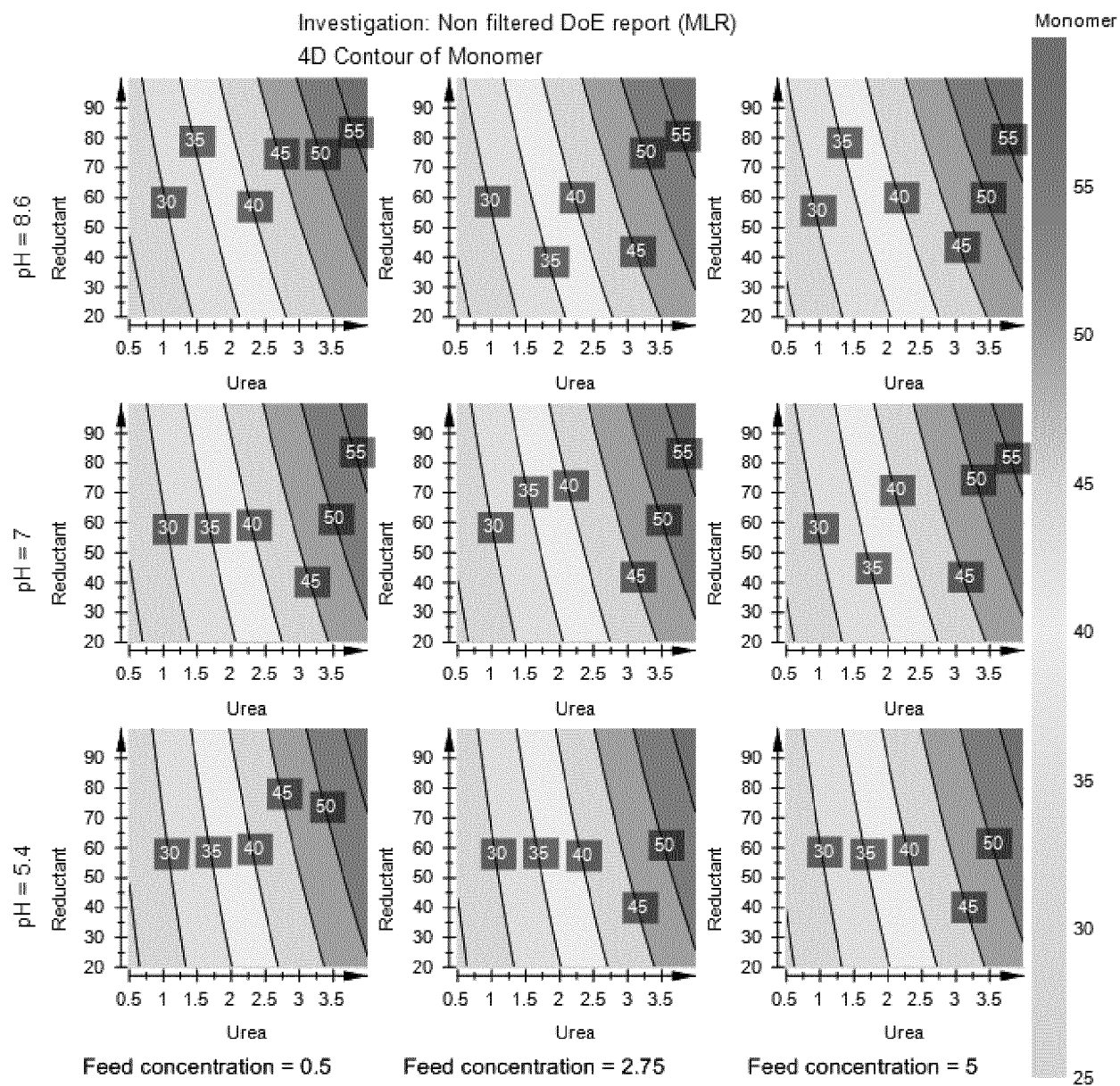
6/24

Figure 3:



7/24

Figure 4



8/24

Figure 5

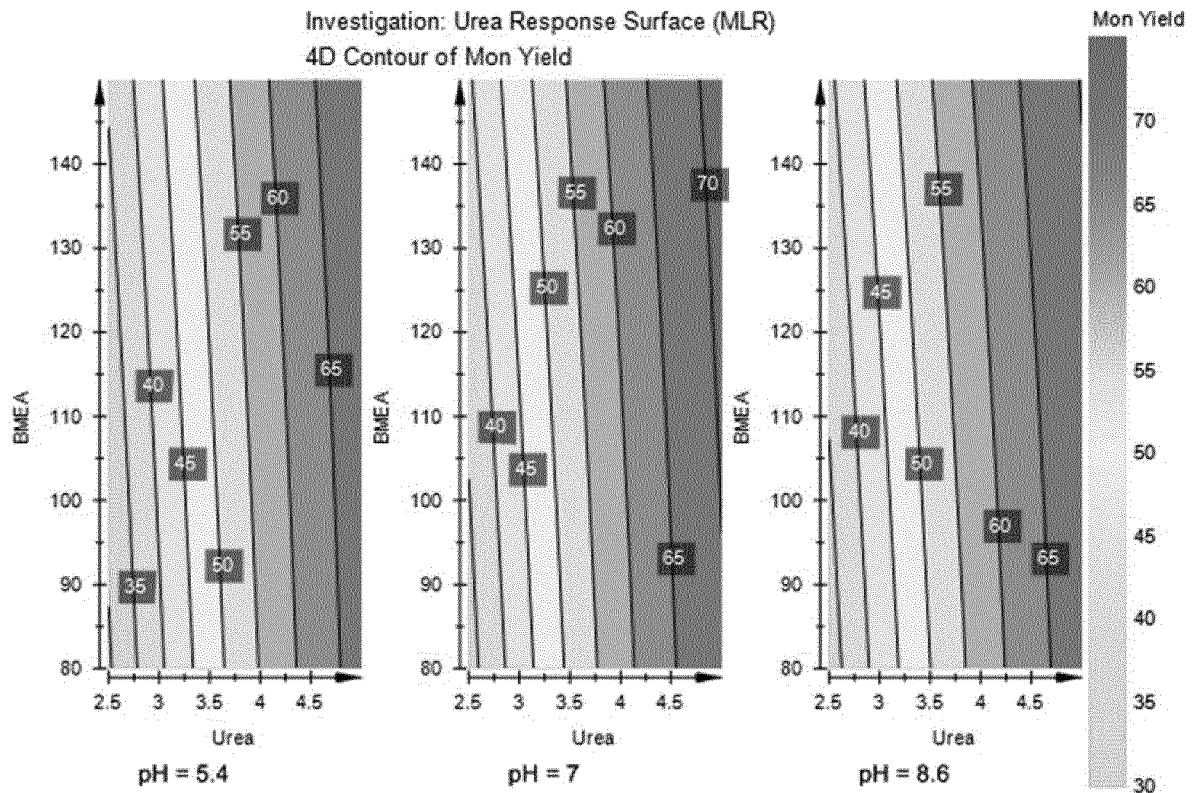
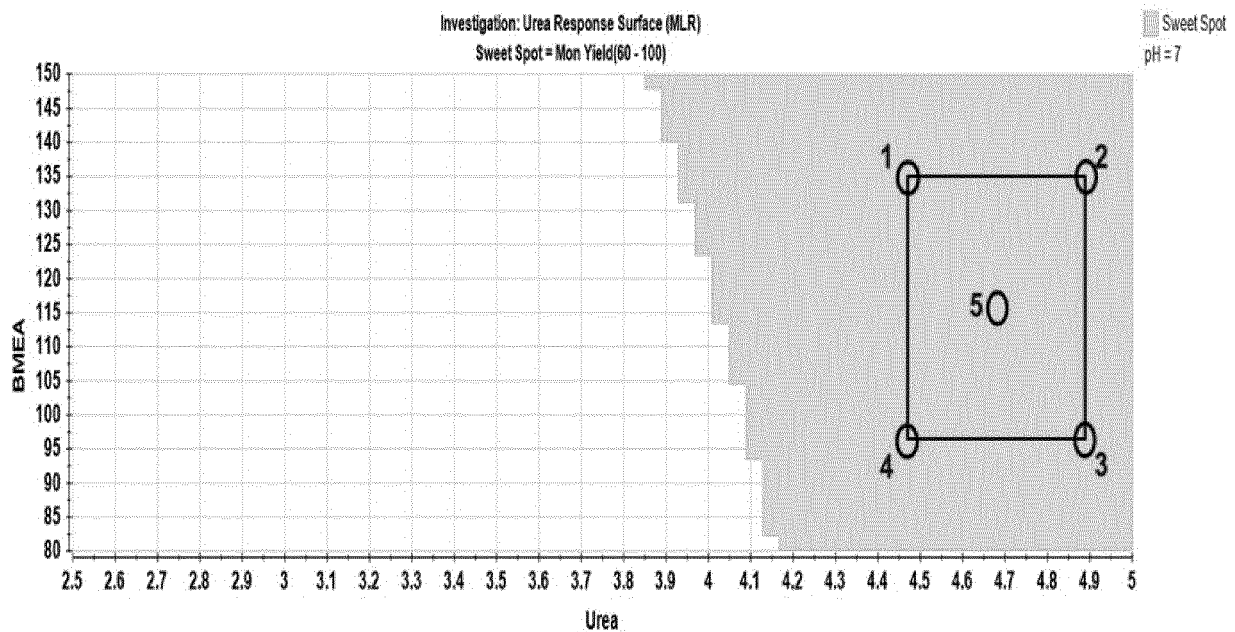


Figure 6



9/24

Figure 7

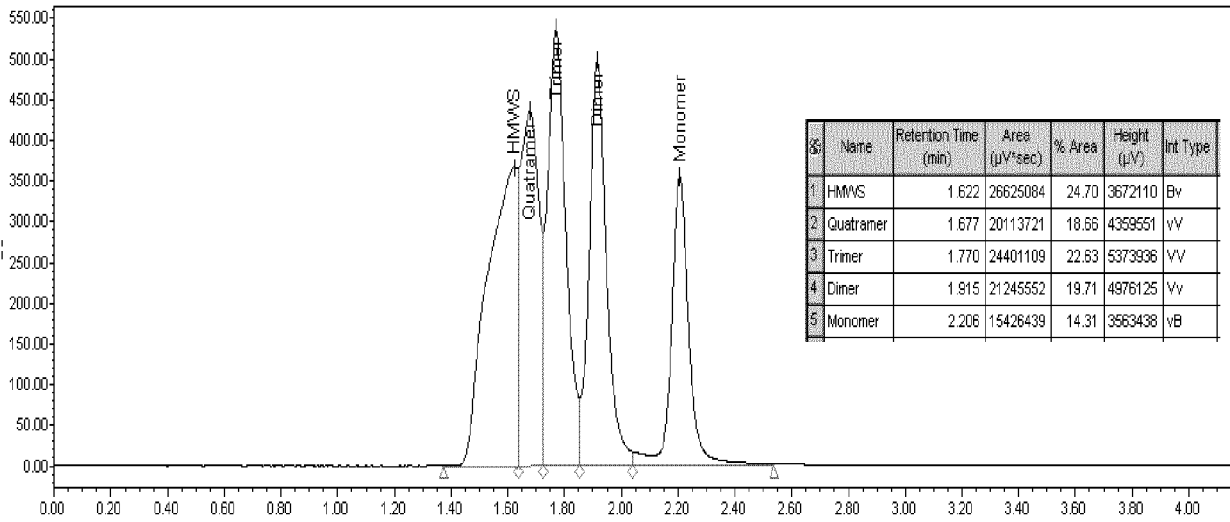
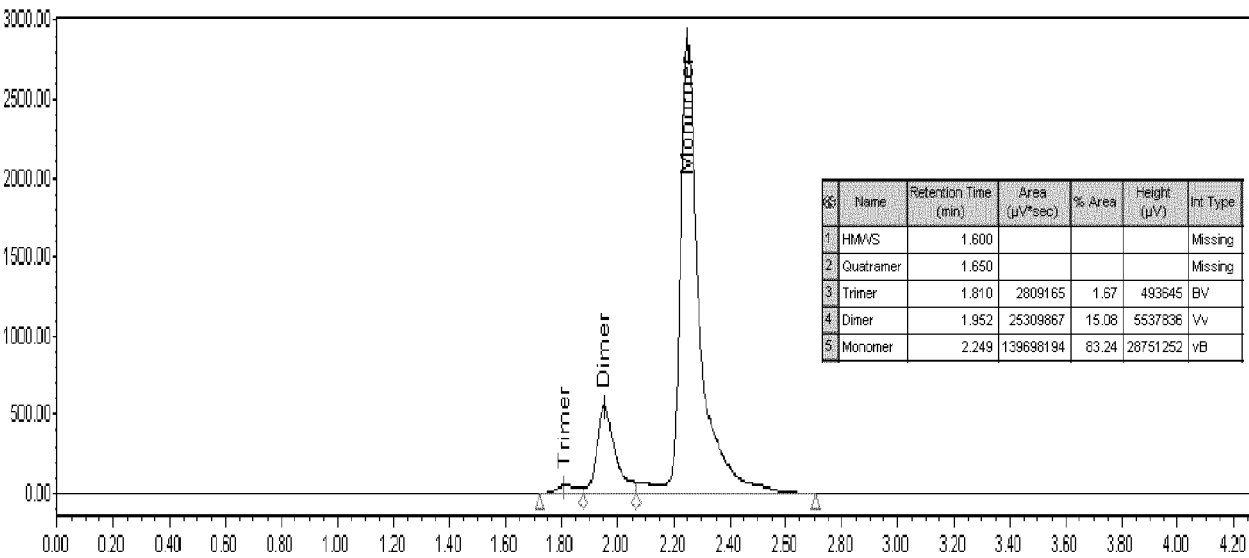
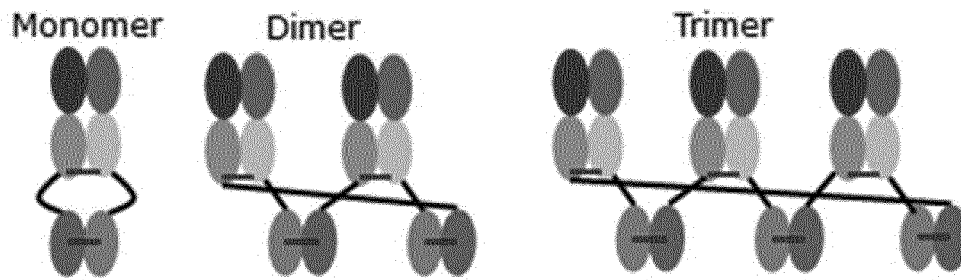


Figure 8:



10/24

FIGURE 9

Fab = Heavy and Light Chain of Fab with a disulfide bond between the heavy and light chain and linkers joined to C-terminus of the constant region of the heavy chain and light chain to join to the dsFv



dsFv = disulfide stabilised Fv and linkers to join to the Fab

11/24

Figure 10

(a) Light chain variable region of antibody A26 specific to OX40 (SEQ ID NO:7)

DIQMTQSPSSLSASVGDRVTITCRATQSIYNALAWYQQKPGKAPKLLIYNANTLHTGVPS
RFSASGSGTDSTLTISLQPEDFATYYCQQYYDYPLTFGGGTKVEIKR

(b) Heavy chain variable region of antibody A26 specific to OX40 (SEQ ID NO:8)

EVQLVESGGGLVQPGGSLRLSCAASGFTFTNYGIHWIRQAPGKGLEWVASISPSGGLTY
YRDSVKGRFTISRDDAKNSPYLQMNSLRAEDTAVYYCATGGEGIFDYWGQGTLLTVSS

(c)

CDRH1: NYGIH (SEQ ID NO:1)
CDRH2: SISPSGGLTYRDSVKG (SEQ ID NO:2)
CDRH3: GGEGIFDY (SEQ ID NO:3)
CDRL1: RATQSIYNALA (SEQ ID NO:4)
CDRL2: NANTLHT (SEQ ID NO:5)
CDRL3: QQYYDYPLT (SEQ ID NO:6)

(d) Light chain of anti-OX40 antibody Fab component (SEQ ID NO:9)

DIQMTQSPSSLSASVGDRVTITCRATQSIYNALAWYQQKPGKAPKLLIYNANTLHTGVPS
RFSASGSGTDSTLTISLQPEDFATYYCQQYYDYPLTFGGGTKVEIKRTVAAPSVFIFPPS
DEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDYSLSSSTL
TLISKADYEEKHKVYACEVTHQGLSSPVTKSFNRGEC

(e) Heavy chain of anti-OX40 antibody Fab component (SEQ ID NO:10)

EVQLVESGGGLVQPGGSLRLSCAASGFTFTNYGIHWIRQAPGKGLEWVASISPSGGLTY
YRDSVKGRFTISRDDAKNSPYLQMNSLRAEDTAVYYCATGGEGIFDYWGQGTLLTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSC

12/24

Figure 11

(a) Heavy chain of anti-albumin Fv component (SEQ ID NO:11)

EVQLLES GGGLVQP GGSRLRLSCAVSGIDLSNYAINWVRQAPGKCLEWIGIHWASGTTFYA
TWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGTLV
TVSS

(b) Light chain of anti-albumin Fv component (SEQ ID NO:12)

DIQMTQSPSSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVP
SRFSGSGSGTDFTLTISLQPEDFATYYCGGGYSSISDTTFGCGTKVEIKRT

(c) Linker 1 (SEQ ID NO:13)

SGGGGSGGGGTGGGGS

(d) Linker 2 (SEQ ID NO:14)

GGGGSGGGGSGGGGS

(e) A26 Fab Heavy-(G4S,G4T,G4S)-645dsFv(gH5) (SEQ ID NO:15)

EVQLVESGGGLVQP GGSRLRLSCAASGFTFTNYGIHWIRQAPGKGLEWVASISPSGGGLTY
YRDSVKGRFTISRDDAKNSPYLQMNSLRAEDTAVYYCATGGEGIFDYWGQGTLVTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCSGGGGSGGGGTGGGGS
EVQLLES GGGLVQP GGSRLRLSCAVSGIDLSNYAINWVRQAPGKCLEWIGIHWASGTTFYA
TWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGTLV
TVSS

(f) A26 Fab Light-(3xG4S)-645dsFv(gL4) (SEQ ID NO:16)

DIQMTQSPSSLSASVGDRVTITCRATQSIYNALAWYQQKPGKAPKLLIYNANTLHTGVPS
RFSASGSGTDSTLTISLQPEDFATYYCQQYYDYPLTFGGGTKVEIKRTVAAPSVFIFPPS
DEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDYSLSSSTL
TLISKADYEEKHKVYACEVTHQGLSSPVTKSFNRGECGGGGSGGGGSGGGGSDIQMTQSP
SSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVPSRFSGSGS
GTDFTLTISLQPEDFATYYCGGGYSSISDTTFGCGTKVEIKRT

13/24

Figure 12

(a) 645gH1 heavy chain variable domain (SEQ ID NO:17)

EVQLLESGGGLVQPGGSLRLSCA VSGIDLSNYAINWVRQAPGKCLEWIGIIWASGTTFYA
TWAKGRFTISR DSTTVYLQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGLVTVS
S

(b) 645gL1 light chain variable domain (SEQ ID NO:18)

DIVMTQSPSSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVP
SRFKGSGSGTDFTLTISLQPEDFATYYCGGGYSSISDTTFGCGTKVEIK

(c) A26 Fab Heavy-(3xG4S)-645dsFv(gH1) (SEQ ID NO:19)

EVQLVESGGGLVQPGGSLRLSCAASGFTFTNYGIHWIRQAPGKGLEWVASISPSGGLTY
YRDSVKGRFTISRDDAKNSPYLQMNSLRAEDTAVYYCATGGEGIFDYWGQGLVTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCSGGGGSGGGGSGGGGS
EVQLLESGGGLVQPGGSLRLSCA VSGIDLSNYAINWVRQAPGKCLEWIGIIWASGTTFYA
TWAKGRFTISR DSTTVYLQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGLVTVS
S

(d) A26 Fab Light-(3xG4S)-645dsFv(gL1) (SEQ ID NO:20)

DIQMTQSPSSLSASVGDRVTITCRATQSIYNALAWYQQKPGKAPKLLIYNANTLHTGVPS
RFSASGSGTDSTLTISLQPEDFATYYCQQYYDYPLTFGGGTKVEIKRTVAAPSVFIFPPS
DEQLKSGTASVVCLLNMFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYLSSTL
TLISKADYEKHKVYACEVTHQGLSSPVTKSFNRGECSGGGGSGGGGSGGGGSDIVMTQS
PSSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVPSRFKGS
SGTDFTLTISLQPEDFATYYCGGGYSSISDTTFGCGTKVEIK

14/24

Figure 13a) DNA encoding Heavy chain A26-645(gH5) including *E.coli* OmpA leader (SEQ ID NO:21)

ATGAAGAAGACTGCTATAGCGATCGCAGTGGCGCTAGCTGGTTTCGCCACCGTGGC
GCAAGCTGAAGTTCAGCTGGTCGAGTCTGGAGGCGGGCTTGTCCAGCCTGGAGGGA
GCCTGCGTCTCTCTTGTGCAGCAAGCGGTTTCACGTTACCAACTACGGTATCCACT
GGATTCGTCAGGCACCAGGTAAAGGTCTGGAATGGGTAGCCTCTATCTCTCCGTCTG
GTGGTCTGACGTACTACCGTGACTCTGTCAAAGGTCGTTTCACCATCTCTCGTGATG
ACGCGAAAACTCTCCGTACCTGCAAATGAACTCTCTGCGTGCAGAAGATAACCGCA
GTGTACTACTGCGCTACTGGTGGTGAAGGTATCTTCGACTACTGGGGTCAGGGTACC
CTGGTAACTGTCTCGAGCGCTTCTACAAAGGGCCCAAGCGTTTTCCCACTGGCTCCG
TCCTCTAAATCCACCTCTGGTGGTACGGCTGCACTGGGTTCGCTGGTGAAGACTAC
TTCCAGAACCAAGTTACCGTGTCTTGGAATCTGGTGCCTGACCTCTGGTGTTCAC
ACCTTTCAGCAGTTCTCCAGTCTTCTGGTCTGTACTCCCTGTCTAGCGTGGTTACCG
TTCCGTCTTCTTCTCTGGGTACTCAGACCTACATCTGCAACGTCAACCACAAACCGTC
CAACACCAAGGTCGACAAAAAAGTCGAGCCGAAATCCTGTAGTGGAGGTGGGGGCT
CAGGTGGAGGCGGGACCGGTGGAGGTGGCAGCGAGGTTCAACTGCTTGAGTCTGGA
GGAGGCCTAGTCCAGCCTGGAGGGAGCCTGCGTCTCTTGTGCAGTAAGCGGCATC
GACCTGAGCAATTACGCCATCAACTGGGTGAGACAAGCTCCGGGGGAAGTGTTTAGA
ATGGATCGGTATAATATGGGCCAGTGGGACGACCTTTTATGCTACATGGGCGAAAG
GAAGGTTTACAATTAGCCGGGACAATAGCAAAAACACCGTGTATCTCCAAATGAAC
TCCTTGCGAGCAGAGGACACGGCGGTGTACTATTGTGCTCGCACTGTCCAGGTTAT
AGCACTGCACCCTACTTCGATCTGTGGGGACAAGGGACCCTGGTGACTGTTTCAAGT
TAA

b) DNA encoding Heavy chain A26-645(gH5) (SEQ ID NO:22)

GAAGTTCAGCTGGTCGAGTCTGGAGGCGGGCTTGTCCAGCCTGGAGGGAGCCTGCG
TCTCTCTTGTGCAGCAAGCGGTTTCACGTTACCAACTACGGTATCCACTGGATTTCG
CAGGCACCAGGTAAAGGTCTGGAATGGGTAGCCTCTATCTCTCCGTCTGGTGGTCTG
ACGTACTACCGTGACTCTGTCAAAGGTCGTTTCACCATCTCTCGTGATGACGCGAAA
AACTCTCCGTACCTGCAAATGAACTCTCTGCGTGCAGAAGATAACCGCAGTGTACTAC
TGCGCTACTGGTGGTGAAGGTATCTTCGACTACTGGGGTCAGGGTACCCTGGTAACT
GTCTCGAGCGCTTCTACAAAGGGCCCAAGCGTTTTCCCACTGGCTCCGTCCTCTAAA
TCCACCTCTGGTGGTACGGCTGCACTGGGTTCGCTGGTGAAGACTACTTCCCAGAA
CCAGTTACCGTGTCTTGGAATCTGGTGCCTGACCTCTGGTGTTCACACCTTTCAG
CAGTTCTCCAGTCTTCTGGTCTGTACTCCCTGTCTAGCGTGGTTACCGTTCCGTCTTCT
TCTCTGGGTACTCAGACCTACATCTGCAACGTCAACCACAAACCGTCCAACACCAAG
GTCGACAAAAAAGTCGAGCCGAAATCCTGTAGTGGAGGTGGGGGCTCAGGTGGAGG
CGGGACCGGTGGAGGTGGCAGCGAGGTTCAACTGCTTGAGTCTGGAGGAGGCCTAG
TCCAGCCTGGAGGGAGCCTGCGTCTCTTGTGCAGTAAGCGGCATCGACCTGAGCA
ATTACGCCATCAACTGGGTGAGACAAGCTCCGGGGGAAGTGTTTAGAATGGATCGGT

15/24

ATAATATGGGCCAGTGGGACGACCTTTTATGCTACATGGGCGAAAGGAAGGTTTAC
AATTAGCCGGGACAATAGCAAAAACACCGTGTATCTCCAAATGAACTCCTTGCGAG
CAGAGGACACGGCGGTGTACTATTGTGCTCGCACTGTCCCAGGTTATAGCACTGCAC
CCTACTTCGATCTGTGGGGACAAGGGACCCTGGTGACTGTTTCAAGTTAA

Figure 14

a) DNA encoding Light chain A26-645(gL4) including E.coli OmpA leader (SEQ ID NO:23)

ATGAAAAAGACAGCTATCGCAATTGCAGTGGCGTTGGCTGGTTTCGCGACCGTTGCG
CAAGCTGATATCCAGATGACCCAGAGCCCAAGCAGTCTCTCCGCCAGCGTAGGCGA
TCGTGTGACTATTACCTGTCGTGCAACCCAGAGCATCTACAACGCTCTGGCTTGGTA
TCAGCAGAAACCGGGTAAAGCGCCAAAACCTCCTGATCTACAACGCGAACACTCTGC
ATACTGGTGTTCGGTCTCGTTTCTCTGCGTCTGGTTCTGGTACGGACTCTACTCTGAC
CATCTCCTCTCTCCAGCCGGAAGATTTTCGCGACCTACTACTGCCAGCAGTACTACGA
TTACCCACTGACGTTTGGTGGTGGTACCAAAGTTGAGATCAAACGTACGGTTGCAGC
TCCATCCGTCTTCATCTTTCCACCGTCTGACGAACAGCTCAAATCTGGTACTGCTTCT
GTCGTTTGCCTCCTGAACAACCTTCTATCCGCGTGAAGCGAAAGTCCAGTGGAAAGTC
GACAACGCACTCCAGTCTGGTAACTCTCAGGAATCTGTGACCGAACAGGACTCCAA
AGACTCCACCTACTCTCTGTCTAGCACCTGACTCTGTCCAAAGCAGACTACGAGAA
ACACAAAGTGACGCTTGCGAAGTTACCCATCAGGGTCTGAGCTCTCCGGTTACCAA
ATCCTTTAATAGAGGGGAGTGTGGTGGCGGTGGCAGTGGTGGTGGAGGTTCCGGAG
GTGGCGGTTTCAGACATACAAATGACCCAGAGTCCTTCATCGGTATCCGCGTCCGTTG
GCGATAGGGTGACTATTACATGTCAAAGCTCTCCTAGCGTCTGGAGCAATTTTCTAT
CCTGGTATCAACAGAAACCGGGGAAGGCTCCAAAACCTTCTGATTTATGAAGCCTCG
AAACTCACCAGTGGAGTTCCGTCAAGATTCAGTGGCTCTGGATCAGGGACAGACTTC
ACGTTGACAATCAGTTCGCTGCAACCAGAGGACTTTGCGACCTACTATTGTGGTGGG
GGTTACAGTAGCATAAGTGATACGACATTTGGGTGCGGTACTAAGGTGGAAATCAA
ACGTACCTAA

b) DNA encoding Light chain A26-645(gL4) (SEQ ID NO:24)

GATATCCAGATGACCCAGAGCCCAAGCAGTCTCTCCGCCAGCGTAGGCGATCGTGT
GACTATTACCTGTCGTGCAACCCAGAGCATCTACAACGCTCTGGCTTGGTATCAGCA
GAAACCGGGTAAAGCGCCAAAACCTCCTGATCTACAACGCGAACACTCTGCATACTG
GTGTTCCGTCTCGTTTCTCTGCGTCTGGTTCTGGTACGGACTCTACTCTGACCATCTC
CTCTCTCCAGCCGGAAGATTTTCGCGACCTACTACTGCCAGCAGTACTACGATTACCC
ACTGACGTTTGGTGGTGGTACCAAAGTTGAGATCAAACGTACGGTTGCAGCTCCATC
CGTCTTCATCTTTCCACCGTCTGACGAACAGCTCAAATCTGGTACTGCTTCTGTTCGTT
TGCCTCCTGAACAACCTTCTATCCGCGTGAAGCGAAAGTCCAGTGGAAAGTCGACAA
CGCACTCCAGTCTGGTAACTCTCAGGAATCTGTGACCGAACAGGACTCCAAAGACTC
CACCTACTCTCTGTCTAGCACCTGACTCTGTCCAAAGCAGACTACGAGAAACACAA
AGTGTACGCTTGCGAAGTTACCCATCAGGGTCTGAGCTCTCCGGTTACCAAATCCTT
TAATAGAGGGGAGTGTGGTGGCGGTGGCAGTGGTGGTGGAGGTTCCGGAGGTGGCG
GTTTCAGACATACAAATGACCCAGAGTCCTTCATCGGTATCCGCGTCCGTTGGCGATA
GGGTGACTATTACATGTCAAAGCTCTCCTAGCGTCTGGAGCAATTTTCTATCCTGGT
ATCAACAGAAACCGGGGAAGGCTCCAAAACCTTCTGATTTATGAAGCCTCGAAACTC
ACCAGTGGAGTTCCGTCAAGATTCAGTGGCTCTGGATCAGGGACAGACTTCACGTTG

17/24

ACAATCAGTTCGCTGCAACCAGAGGACTTTGCGACCTACTATTGTGGTGGAGGTAC
AGTAGCATAAGTGATACGACATTTGGGTGCGGTACTAAGGTGGAAATCAAACGTAC
CTAA

Figure 15

a) DNA encoding Heavy chain A26-645(gH5) including B72.3 leader sequence (SEQ ID NO:25)

ATGGAATGGTCCTGGGTCTTCCTGTTTTCTTTCTGTCACAACCGGGGTGCACAGCG
AGGTGCAGCTCGTCGAGTCTGGAGGCGGGCTTGTCCAGCCTGGAGGGAGCCTGCGT
CTCTCTTGTGCAGCAAGCGGTTTCACGTTACCAACTACGGTATCCACTGGATTCTGTC
AGGCACCAGGTAAAGGTCTGGAATGGGTAGCCTCTATCTCTCCGTCTGGTGGTCTGA
CGTACTACCGTGACTCTGTCAAAGGTCGTTTCACCATCTCTCGTGATGACGCGAAAA
ACTCTCCGTACCTGCAGATGAACTCTCTGCGTGCAGAAGATACCGCAGTGTACTACT
GCGCTACTGGTGGTGAAGGTATCTTCGACTACTGGGGTCAGGGTACCCTGGTAACTG
TCTCAAGCGCTTCTACAAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAGA
GCACCTCTGGGGGACAGCGGCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGAA
CCGGTGACGGTGTCTGGAAGTCAAGGCGCCCTGACCAGCGGCGTGCACACCTTCCC
GGCTGTCCTACAGTCCTCTGGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCTC
CAGCAGCTTGGGCACCCAGACCTACATCTGCAACGTGAATCACAAGCCCAGCAACA
CCAAGGTGGACAAGAAAGTTGAGCCCAAATCTTGTTCCGGAGGTGGCGGTTCCGGA
GGTGGCGGTACCGGTGGCGGTGGATCCGAAGTCCAGCTGCTTGAATCCGGAGGCGG
ACTCGTGCAGCCCGGAGGCAGTCTTCGCTTGTCCTGCGCTGTATCTGGAATCGACCT
GAGCAATTACGCCATCAACTGGGTGAGACAGGCACCTGGGAAATGCCTCGAATGGA
TCGGCATTATATGGGCTAGTGGGACGACCTTTTATGCTACATGGGCGAAGGGTAGAT
TCACAATCTCACGGGATAATAGTAAGAACACAGTGTACCTGCAGATGAACTCCCTGC
GAGCAGAGGATACCGCCGTTTACTATTGTGCTCGCACTGTCCCAGGTTATAGCACTG
CACCTACTTTGATCTGTGGGGGCAGGGCACTCTGGTCACCGTCTCGAGTTGA

b) DNA encoding Heavy chain A26-645(gH5) (SEQ ID NO:26)

GAGGTGCAGCTCGTCGAGTCTGGAGGCGGGCTTGTCCAGCCTGGAGGGAGCCTGCG
TCTCTCTTGTGCAGCAAGCGGTTTCACGTTACCAACTACGGTATCCACTGGATTCTG
CAGGCACCAGGTAAAGGTCTGGAATGGGTAGCCTCTATCTCTCCGTCTGGTGGTCTG
ACGTACTACCGTGACTCTGTCAAAGGTCGTTTCACCATCTCTCGTGATGACGCGAAA
AACTCTCCGTACCTGCAGATGAACTCTCTGCGTGCAGAAGATACCGCAGTGTACTAC
TGGCTACTGGTGGTGAAGGTATCTTCGACTACTGGGGTCAGGGTACCCTGGTAACT
GTCTCAAGCGCTTCTACAAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAG
AGCACCTCTGGGGGACAGCGGCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGA
ACCGGTGACGGTGTCTGGAAGTCAAGGCGCCCTGACCAGCGGCGTGCACACCTTCC
CGGCTGTCCTACAGTCCTCTGGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCT
CCAGCAGCTTGGGCACCCAGACCTACATCTGCAACGTGAATCACAAGCCCAGCAAC
ACCAAGGTGGACAAGAAAGTTGAGCCCAAATCTTGTTCCGGAGGTGGCGGTTCCGG
AGGTGGCGGTACCGGTGGCGGTGGATCCGAAGTCCAGCTGCTTGAATCCGGAGGCG
GACTCGTGCAGCCCGGAGGCAGTCTTCGCTTGTCCTGCGCTGTATCTGGAATCGACC
TGAGCAATTACGCCATCAACTGGGTGAGACAGGCACCTGGGAAATGCCTCGAATGG
ATCGGCATTATATGGGCTAGTGGGACGACCTTTTATGCTACATGGGCGAAGGGTAGA

19/24

TTCACAATCTCACGGGATAATAGTAAGAACACAGTGTACCTGCAGATGAACTCCCTG
CGAGCAGAGGATACCGCCGTTTACTATTGTGCTCGCACTGTCCCAGGTTATAGCACT
GCACCCTACTTTGATCTGTGGGGGCAGGGCACTCTGGTCACCGTCTCGAGTTGA

20/24

Figure 16

a) DNA encoding Light chain A26-645(gL4) including B72.3 leader sequence (SEQ ID NO:27)

ATGTCAGTTCCCACACAGGTGCTGGGCCTGCTTCTGTTGTGGCTCACCGATGCTAGG
TGTGATATCCAGATGACCCAGAGTCCAAGCAGTCTCTCCGCCAGCGTAGGCGATCGT
GTGACTATTACCTGTCGTGCAACCCAGAGCATCTACAACGCTCTGGCTTGGTATCAG
CAGAAACCGGGTAAAGCGCCAAAACCTCCTGATCTACAACGCGAACACTCTGCATAC
CGGTGTTCCGTCTCGTTTCTCTGCGTCTGGTTCTGGTACGGACTCTACTCTGACCATC
TCCTCTCTGCAGCCGGAAGATTTCGCGACCTACTACTGCCAGCAGTACTACGATTAC
CCACTGACGTTTGGTGGTGGTACCAAAGTTGAGATCAAACGTACGGTGGCTGCACCA
TCTGTCTTCATCTTCCCCCATCTGATGAGCAGTTGAAGTCTGGCACTGCCTCTGTTG
TGTGCCTGCTGAATAACTTCTACCCTAGAGAGGCCAAAGTCCAGTGGAAGGTGGAT
AACGCCCTTCAATCCGGAAACTCCCAGGAGAGTGTCACTGAGCAGGACTCAAAGGA
CTCCACCTATAGCCTTAGCAGCACACTGACACTGAGCAAGGCTGACTACGAGAAAC
ACAAGGTCTACGCCTGCGAAGTGACACATCAAGGCCTGAGCTCACCCGTGACAAAG
AGCTTTAACAGGGGAGAGTGTGGTGGAGGTGGCTCTGGCGGTGGTGGCTCCGGAGG
CGGAGGAAGCGACATCCAGATGACCCAGAGCCCTTCCTCTGTAAGCGCCAGTGTCG
GAGACAGAGTGACTATTACCTGCCAAAGCTCCCCTTCAGTCTGGTCCAATTTTCTAT
CCTGGTACCAGCAAAAGCCCGGAAAGGCTCCTAAATTGCTGATCTACGAAGCAAGC
AAACTCACCAGCGGCGTGCCAGCAGGTTTCAGCGGCAGTGGGTCTGGAAGTACTGACTT
TACCCTGACAATCTCCTCACTCCAGCCCGAGGACTTCGCCACCTATTACTGCGGTGG
AGGTTACAGTAGCATAAGTGATACGACATTTGGATGCGGCACTAAAGTGGAATCA
AGCGTACCTGA

b) DNA encoding Light chain A26-645(gL4) (SEQ ID NO:28)

GATATCCAGATGACCCAGAGTCCAAGCAGTCTCTCCGCCAGCGTAGGCGATCGTGT
GACTATTACCTGTCGTGCAACCCAGAGCATCTACAACGCTCTGGCTTGGTATCAGCA
GAAACCGGGTAAAGCGCCAAAACCTCCTGATCTACAACGCGAACACTCTGCATACCG
GTGTTCCGTCTCGTTTCTCTGCGTCTGGTTCTGGTACGGACTCTACTCTGACCATCTC
CTCTCTGCAGCCGGAAGATTTCGCGACCTACTACTGCCAGCAGTACTACGATTACCC
ACTGACGTTTGGTGGTGGTACCAAAGTTGAGATCAAACGTACGGTGGCTGCACCATC
TGTCTTCATCTTCCCCCATCTGATGAGCAGTTGAAGTCTGGCACTGCCTCTGTTGTG
TGCCTGCTGAATAACTTCTACCCTAGAGAGGCCAAAGTCCAGTGGAAGGTGGATAA
CGCCCTTCAATCCGGAAACTCCCAGGAGAGTGTCACTGAGCAGGACTCAAAGGACT
CCACCTATAGCCTTAGCAGCACACTGACACTGAGCAAGGCTGACTACGAGAAACAC
AAGGTCTACGCCTGCGAAGTGACACATCAAGGCCTGAGCTCACCCGTGACAAAGAG
CTTTAACAGGGGAGAGTGTGGTGGAGGTGGCTCTGGCGGTGGTGGCTCCGGAGGCG
GAGGAAGCGACATCCAGATGACCCAGAGCCCTTCCTCTGTAAGCGCCAGTGTCGGA
GACAGAGTGACTATTACCTGCCAAAGCTCCCCTTCAGTCTGGTCCAATTTTCTATCCT
GGTACCAGCAAAAGCCCGGAAAGGCTCCTAAATTGCTGATCTACGAAGCAAGCAAA
CTCACCAGCGGCGTGCCAGCAGGTTTCAGCGGCAGTGGGTCTGGAAGTACTGACTTTACC

21/24

CTGACAATCTCCTCACTCCAGCCCGAGGACTTCGCCACCTATTACTGCGGTGGAGGT
TACAGTAGCATAAGTGATACGACATTTGGATGCGGCACTAAAGTGGAATCAAGCG
TACCTGA

FIGURE 17

(a) Heavy chain variable domain of anti-albumin antibody (no ds) (SEQ ID NO:29)

EVQLLES GGGLVQPGGSLRLSCAVSGIDLSNYAINWVRQAPGKGLEWIGIHWASGTTFY
ATWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGT
LVTSS

(b) Heavy chain variable domain of anti-albumin antibody (ds) (SEQ ID NO:30)

EVQLLES GGGLVQPGGSLRLSCAVSGIDLSNYAINWVRQAPGKCLEWIGIHWASGTTFYA
TWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGT
LVTSS

(c) Light chain variable domain of anti-albumin antibody (no ds) (SEQ ID NO:31)

DIQMTQSPSSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVP
SRFSGSGSGTDFTLTIS SLQPEDFATYYCGGGYSSISD TTFGGGTKVEIKRT

(d) Light chain variable domain of anti-albumin antibody (ds) (SEQ ID NO:32)

DIQMTQSPSSVSASVGDRVTITCQSSPSVWSNFLSWYQQKPGKAPKLLIYEASKLTSGVP
SRFSGSGSGTDFTLTIS SLQPEDFATYYCGGGYSSISD TTFGCGTKVEIKRT

(e) Linker 1 (SEQ ID NO:33) SGGGSGGGGTGGGGS

(f) Linker 2 (SEQ ID NO:34) GGGSGGGSGGGGS

645 gH5gL4 specific to albumin (SEQ ID NO: 35)

GAGGTTCA GCTGCTGGAGTCTGGAGGCGGGCTTG TCCAGCCTGGAGGGAGCCTGCG
TCTCTCTTGTGCAGTAAGCGGCATCGACCTGTCCA ACTACGCGATTA ACTGGGTACG
TCAGGCACCGGGTAAAGGTCTGGAATGGATCGGCATCATCTGGGCCTCTGGTACGA
CCTTCTACGCTACTTGGG CCAAAGGTCGTTTCACCATCTCCCGTGACAACTCTAAAA
ACACCGTGTACCTGCAGATGAACTCTCTGCGTGCGGAAGACACTGCGGTTTACTATT
GCGCGCGTACCGTTCCGGGCTATTCTACTGCACCGTACTTCGACCTGTGGGGTCAGG
GTACTCTGGTTACCGTCTCGAGTGGAGGTGGCGGTTCTGGCGGTGGCGGTTCCGGTG
GCGGTGGATCGGGAGGTGGCGGTTCTGATATCCAGATGACCCAGAGTCCAAGCAGT
GTTTCCGCCAGCGTAGGCGATCGTGTGACTATTACCTGT CAGTCCTCTCCGAGCGTTT
GGTCCA ACTTCCTGAGCTGGTACCAGCAGAAACCGGGTAAAGCCCCGAAACTGCTG
ATCTACGAGGCGTCTAAACTGACCTCTGGTGTACCGTCCCGTTTCTCTGGCTCTGGCT
CTGGTACGGACTTCACTCTGACCATCTCCTCTCTGCAGCCGGAAGACTTTGCAACGT

22/24

ACTACTGCGGTGGTGGTTACTCTTCCATCTCTGACACCACGTTCCGGTGGAGGCACCA
AAGTTGAAATCAAACGTACGCATCACCATCACCATCACCATCACCATCAC

645 gH5gL4 specific to albumin (SEQ ID NO: 36)

EVQLLES GGGLVQPGGSLRLSCAVSGIDLSNYAINWVRQAPGKGLEWIGIHWASGTTFY
ATWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGTL
VTVSSGGGGSGGGSGGGSGGGSGGGSDIQMTQSPSSVSASVGDRVTITCQSSPSVWSNFL
SWYQQKPGKAPKLLIYEASKLTSGVPSRFSGSGSGTDFTLTISLQPEDFATYYCGGGYS
SISDTTFGGGGTKVEIKRTHHHHHHHHHH

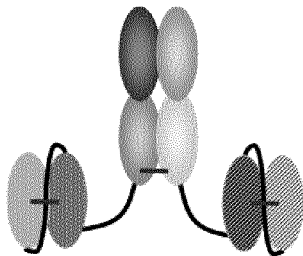
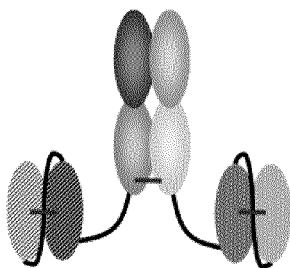
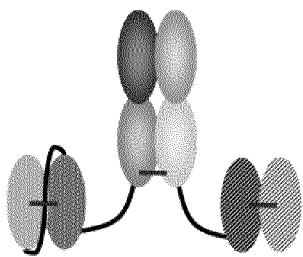
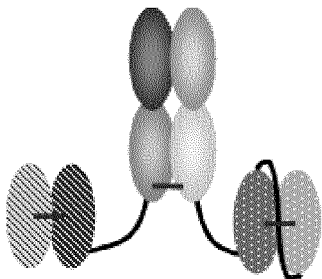
645 gH5gL4ds specific to albumin (SEQ ID NO: 37)

GAGGTT CAGCTGCTGGAGTCTGGAGGCGGGCTTGTCAGCCTGGAGGGAGCCTGCG
TCTCTCTTGTGCAGTAAGCGGCATCGACCTGTCCAAC TACGCGATTA ACTGGGTACG
TCAGGCACCGGGTAAATGCCTGGAATGGATCGGCATCATCTGGGCCTCTGGTACGAC
CTTCTACGCTACTTGGGCCAAAGGTCGTTTACCATCTCCCGTGACAACTCTAAAAA
CACCGTGTACCTGCAGATGAACTCTCTGCGTGCGGAAGACACTGCGGTTTACTATTG
CGCGCGTACCGTTCCGGGCTATTCTACTGCACCGTACTTCGACCTGTGGGGT CAGGG
TACTCTGGTTACCGTCTCGAGTGGAGGTGGCGGTTCTGGCGGTGGCGGTTCCGGTGG
CGGTGGATCGGGAGGTGGCGGTTCTGATATCCAGATGACCCAGAGTCCAAGCAGTG
TTTCCGCCAGCGTAGGCGATCGTGTGACTATTACCTGTCAGTCTCTCCGAGCGTTTG
GTCCAAC TCTCCTGAGCTGGTACCAGCAGAAACCGGGTAAAGCCCCGAAACTGCTGA
TCTACGAGGCGTCTAAACTGACCTCTGGTGTACCGTCCCGTTTCTCTGGCTCTGGCTC
TGGTACGGACTTCACTCTGACCATCTCCTCTCTGCAGCCGGAAGACTTTGCAACGTA
CTACTGCGGTGGTGGTTACTCTTCCATCTCTGACACCACGTTCCGGTTGTGGCACCAA
AGTTGAAATCAAACGTACGCATCACCATCACCATCACCATCACCATCAC

645 gH5gL4ds specific to albumin (SEQ ID NO: 38)

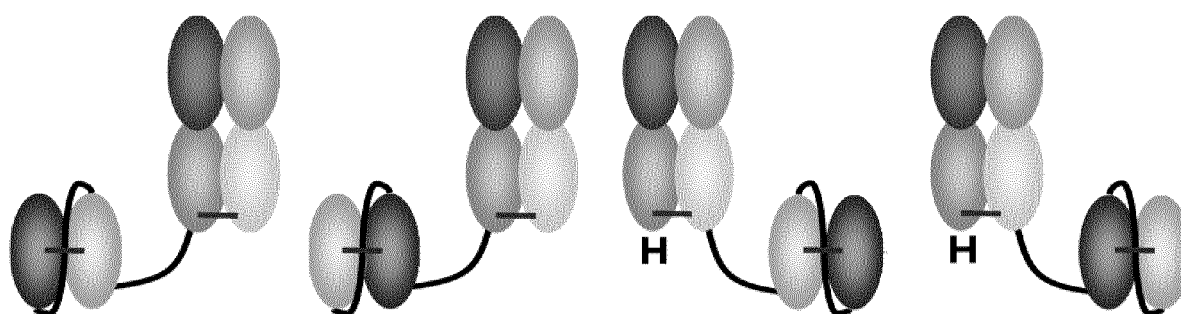
EVQLLES GGGLVQPGGSLRLSCAVSGIDLSNYAINWVRQAPGKCLEWIGIHWASGTTFYA
TWAKGRFTISRDN SKNTVY LQMNSLRAEDTAVYYCARTVPGYSTAPYFDLWGQGTLV
TVSSGGGGSGGGSGGGSGGGSGGGSDIQMTQSPSSVSASVGDRVTITCQSSPSVWSNFLS
WYQQKPGKAPKLLIYEASKLTSGVPSRFSGSGSGTDFTLTISLQPEDFATYYCGGGYSSI
SDTTFGCGTKVEIKRTHHHHHHHHHH

23/24

FIGURE 18**Fab-2x dsscFv formats and Fab-dsscFv-dsFv format****Fab#2-(HC)-dsscFv#3-(LC)-dsscFv#4****Fab#2-(LC)-dsscFv#3-(HC)-dsscFv#4****Fab-(HC)dsscFv-(LC)dsFv****Fab-(HC)dsFv-(LC)dsscFv**

24/24

FIGURE 19



Fab(HC)-LHdsscFv

Fab(HC)-HLdsscFv

Fab(LC)-LHdsscFv

Fab(LC)-HLdsscFv